

influence of a regions physical characteristics as well as climatic influence that occur with time. This chapter ends with an overview of the fossil history of coastal redwoods.

Included in the final chapter are modern topics including climate change, human practices, distribution of plants, agriculture and grazing practices, invasive weeds, habitat loss, habitat restoration and biodiversity.

The new edition of *Introduction to California Plant Life* is a wonderful resource for anybody looking to learn more about the ecology of California flora. Keep in mind that some familiarity with botany and ecology concepts will greatly increase the usefulness and ease of reading. Throughout the book, the information and discussions are accented with color photos of plant species and regional characteristics. The authors' inclusion of historical information, anecdotes, and interesting factoids enhances the readers understanding of plant life throughout the state of California. The next time you embark on a California adventure, be sure to bring along this book.—Lee Luckeydoo, *Herbarium*, Botanical Research Institute of Texas, 509 Pecan Street, Fort Worth, TX 76102-4060, U.S.A.

RONALD L. JONES. 2005. **Plant Life in Kentucky: An Illustrated Guide to the Vascular Flora.** (ISBN 0-8131-2331-3, hbk.). The University Press of Kentucky, 663 South Limestone Street, Lexington, KY 40508-4008, U.S.A. (Orders: 800-839-6855, fax 859-257-8481, www.universitypress.com). \$75.00, 834 pp., 1984 b/w line drawn illustrations, 16 tables, 20 figures, 7" × 10".

Plant Life in Kentucky: An Illustrated Guide to the Vascular Flora is a monumental work—it will serve as a comprehensive reference guide to the plant life in Kentucky and an identification manual of the vascular plants for generations of botanists in the Commonwealth. Jones' manual provides the first complete comprehensive treatment of all the known native and naturalized vascular plants of Kentucky, and presents the first set of identification keys for any state flora in the south-central United States. It is the first state flora to incorporate a significant number of the recently proposed major changes in the classification and nomenclature of vascular plants, e.g., Asteraceae and Liliaceae (Jones 2005; SE Biology 52:118), while basically following Gleason and Cronquist's (1991) *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*. Individuals will also find it valuable for the flora of Tennessee as most vascular plants in east-central, central, and western Tennessee are included in the keys.

Jones' *Plant Life in Kentucky: An Illustrated Guide to the Vascular Flora* is essentially two books combined. Part I, Introduction, and Part II, Taxonomic Treatment.

Part I, Introduction, the outstanding reference guide to Kentucky flora, is comprised of 12 sections: Section 1, Overview of This Book—covers plants treated, arrangement of taxa, abbreviated family descriptions, use of keys and abbreviations, sources of information, nomenclature, flowering period, habitats, distributions by physiographic province, relative abundance, non-native species, wetland categories, and a summary of the flora; Section 2, The Physical Setting of Kentucky—contains Kentucky descriptive material, climate, and natural regions by physiographic provinces, forest regions, and ecoregions (Appalachian Plateaus, Interior Low Plateaus, and Mississippi Embayment); Section 3, Vegetation of Kentucky—discusses the forest regions and various plant communities of Kentucky including endangered, threatened, and rare plants; Section 4, Floristic Affinities—intraneous and extraneous floristic affinities are discussed for taxa among the Kentucky floristic regions or ecoregions; Section 5, Endemics—lists plants endemic to Kentucky or to Kentucky and nearby states; Section 6, Conservation Status—covers levels of plant protection in the United States on the international, national, and state-listed species; Section 7, Status of Old-growth Forest—discusses the historical reports and current old-growth forest in Kentucky; Section 8, History of Plant Conservation in Kentucky—deals with biodiversity issues and the preservation of Kentucky

biodiversity by state, federal, and private agencies; Section 9, History of Plant Life in Kentucky—begins with a Geological Overview through the Paleozoic, Mesozoic, and Cenozoic eras, their respective geological periods, and the origins of the flora and then concludes with the impact on the vegetation and flora by the Native Americans and influence of Presettlement Conditions; Section 10, Postsettlement Changes in the Plant Life of Kentucky—begins with the effects of habitat alterations from logging, coal mining, wetland losses, acid precipitation and ozone damage, global warming, fungal, animal, and naturalized pests, and concludes with the effects of overzealous harvesting of plants for medicinal or ornamental uses; Section 11, History of Floristic Botany in Kentucky—commemorates the significant men and women contributors to the Kentucky flora from the Antebellum Period, Civil War and Postbellum Period, and Modern Field Botany to the Present; and Section 12, Current Status of Floristic Botany in Kentucky—presents an overview of today's needs to document the botanical biodiversity by geographical regions and counties. Part I consists of 105 pages and ends with an extensive Literature Cited of 439 references.

Part II, the Taxonomic Treatment, consists of diagnostic keys to families, genera, and species present or to be discovered in Kentucky. A total of 179 families, 856 genera, and 2600 specific and infraspecific taxa are treated. Illustrations consist of 1984 black-and-white line drawings, most from Britton and Brown's (1913) three volume work, *An Illustrated Flora of Northern United States and Canada*.

Plant families are determined from the General Keys to Vascular Plants of Kentucky, which lead to four groups: Chapter 1, Pteridophytes of Kentucky; Chapter 2, Gymnosperms of Kentucky; Chapter 3, Dicotyledonae of Kentucky, and Chapter 4, Monocotyledonae of Kentucky. All four chapters have the families, genera, and species listed alphabetically—a highly convenient way to present taxa to workers. These four groups includes family descriptions (habit, leaf arrangement, composition, stipules, flower sex and symmetry, inflorescence type, floral formula, and fruit type), family notes (information on wildlife use and/or human use, important weeds, poisonous plants, and medicinal herbs), and relevant references. The species accounts lists the scientific name, an accepted common name, relevant synonymy, flowering periods, habitat, physiographic distribution, relative abundance, and state/federal designations, and national wetland classification rating. Also, workers can readily locate a family by using the Family Index inside the back cover, then finding the alphabetically-listed genera and species.

The family, genera, and species keys work remarkably well and it is enlightening to find keys that work for plant identification which are complete enough to make accurate identifications, yet not overly complicated to use. A complete, well-defined glossary is available for the vegetative and reproductive morphological terms used in the keys.

The Literature Cited contains 288 references cited in Part II, Taxonomic Treatment. Five appendices follow the Literature Cited. Appendix One, Glossary, consists of nearly 1500 terms as modified from Diggs, Lipscomb, and O'Kennon's (1999) *Shinners & Mahler's Illustrated Flora of North Central Texas*; Appendix Two, Index of Part I; Appendix Three, Index of Scientific Names in Part II; Appendix Four, Index of Common Names in Part II; and Appendix Five, Index of Poplar Books (with Color Photographs) on the Flora of the South-central United States and the Southern Appalachians. Part II consists of 728 pages with the total book composed of 834 pages.

Plant Life in Kentucky: An Illustrated Guide to the Vascular Flora is essential for all persons interested in natural history and vascular plants of Kentucky and the south-central United States in general—it is indispensable for botanists in the Commonwealth. Jones' manual is the most comprehensive and encyclopedic state flora east of the Mississippi River. This remarkable book should be an important addition to the library of every botanist in the eastern United States—Ralph L. Thompson, Herbarium, Department of Biology, Berea College, Berea, KY 40404-2121, U.S.A., ralph_l_thompson@berea.edu